

**DEPARTMENT OF TRANSPORTATION****DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-000076**Date Inspected:** 02-Mar-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

**CWI Name:** Jiang Xiao Hu  
**Inspected CWI report:** Yes No N/A  
**Electrode to specification:** Yes No N/A  
**Qualified Welders:** Yes No N/A  
**Approved Drawings:** Yes No N/A

**CWI Present:** Yes No  
**Rod Oven in Use:** Yes No N/A  
**Weld Procedures Followed:** Yes No N/A  
**Verified Joint Fit-up:** Yes No N/A  
**Approved WPS:** Yes No N/A  
**Delayed / Cancelled:** Yes No N/A  
**Component:** N/A

**Bridge No:** 34-0006**Summary of Items Observed:**

The CALTRANS Quality Assurance (QA) Inspector, Alfredo Acuna was present for the welding qualification testing pertinent for the welding qualification record (PQR) HP200709 scheduled for this project.

ZPMC, welder operator Jiang Xian Hu was observed by the QA Inspector performing welding operations following the preliminary welding procedure specification PWPS-B-T-2233-F-1 for the PQR identified as HP200709. Base metal was designated as A-709-50F-2 (Heat # 07200455030101) and met the fracture critical requirements. The root opening of the joint was approximately 6 mm. ZPMC followed the production procedure welding procedure specification (WPS) criteria (AWS 5.13) using the automatic flux cored arc welding gas (FCAW-G) process in the vertical (3G) position with the 1.4 mm diameter TWE-711 electrode. The QA Inspector verified dimensions for the test coupon, amperages, voltages, travel speeds, preheat and heat interpass temperatures. The QA inspector recorded welding parameters for a total of 9 passes (6 layers). The QA inspectors discovered that the welding parameters taken by Quality Control (QC) inspector Cheng Libin and ZPMC QA inspector Xu Jun appeared to be accurate and in accordance with the contract documents with the exception of the travel speed. The QA inspector had a conversation with the Mr. Xu and Deputy General Manager Hu Gang. The QA inspector brought to the attention of Mr. Xu and Mr. Hu that the travel speed recorded by Mr. Xu was 110 mm/min in lieu of 123 mm/min. Mr. Xu agreed. Mr. Xu relayed to the QA inspector that the travel speed was inadvertently recorded as 110 mm/min. Mr. Hu relayed that ZPMC was going to revise the PWPS-B-T-2233-F-1. ZPMC revised the travel speed and heat input listed on ZPMC preliminary WPS and proceed welding until completion. ZPMC QC Jiang Xiao Hu witnessed the testing and performed visual weld inspections. The QA inspector issued a lot number of B71-001-07 after the completion of the PQR. See TL\_6032 for details of this test. The digital photograph below shows the PQR HP200709 electrode description.

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## WELDING INSPECTION REPORT

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### Summary of Conversations:

As noted on paragraph above

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Acuna, Alfredo	Quality Assurance Inspector
<b>Reviewed By:</b>	McClary, David	QA Reviewer

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